

METHOD AND DEVICE FOR READING DEEP BAR CODES
BY WAY OF OPTICAL INTERFERENCE

ABSTRACT

5 This invention relates to a method for reading, while
using optical interference, a barcode that extends into the
depth of a substrate. The barcode is represented by an area
with marks in the substrate that is partially transparent to
electromagnetic radiation. The inventive method comprises the
steps of irradiating the substrate with short coherence length
10 light from a broad-band light source, dividing the light up
into reference light and measuring light, returning the
reference light and the measuring light back-scattered or
reflected in the marked area to an analytical unit, determining
the reflectance or the reflectivity of the substrate for all
15 layer depths in the marked area from the interference of the
reference light and the measuring light and interpreting the
result as a barcode.